

**California Environmental Protection Agency
AIR RESOURCES BOARD**

Executive Order G-70-169-AA

**Modification to the Certification of the
Franklin Electric INTELLIVAC Phase II Vapor Recovery System**

WHEREAS, the California Air Resources Board ("the Board" or "CARB") has established, pursuant to California Health and Safety Code sections 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during motor vehicle fueling operations (Phase II vapor recovery systems) in its "CP-201 Certification Procedure for Vapor Recovery Systems of Dispensing Facilities" (the "Certification Procedures") as last amended April 12, 1996, incorporated by reference into Title 17, California Code of Regulations, Section 94011;

WHEREAS, the Board has established, pursuant to California Health and Safety Code sections 39600, 39601 and 41954, test procedures for determining the compliance of Phase II vapor recovery systems with emission standards in its "Certification and Test Procedures for Vapor Recovery Systems," CP-201.1 through CP-201.6 ("the Test Procedures") as adopted April 12, 1996, incorporated by reference into Title 17, California Code of Regulations, Section 94011;

WHEREAS, Franklin Electric Company ("Franklin Electric"), requested and was granted certification of the INTELLIVAC Phase II vapor recovery system ("INTELLIVAC system") pursuant to the Certification and Test Procedures on February 9, 1996 by Executive Order G-70-169;

WHEREAS, modification of the INTELLIVAC system certification was necessary to incorporate an alternate design for the Husky V34 Model 6250 nozzle as well as additional approved equipment;

WHEREAS, the modification to the certification of the INTELLIVAC system has been evaluated pursuant the Board's Certification Procedures;

WHEREAS, the Certification Procedures (CP-201) provides that the Executive Officer shall issue an order of certification if he or she determines that the vapor recovery system conforms to all of the applicable requirements set forth in the Certification Procedures;

WHEREAS, I, Michael P. Kenny, Air Resources Board Executive Officer, find that the INTELLIVAC system conforms with all the requirements set forth in the Certification Procedures, and results in a vapor recovery system which is at least 95 percent effective for attendant and/or self-serve use at gasoline service stations when used in conjunction with a Phase I vapor recovery system which has been certified by the Board and meets the requirements contained in Exhibit 2 of this Order.

NOW, THEREFORE, IT IS HEREBY ORDERED that the INTELLIVAC system when used with a CARB-certified Phase I system, as specified in Exhibits 1 and 2 of this Order, is certified to be at least 95 percent effective in attended and/or self-serve mode. **Compatibility of this system with the onboard vapor recovery systems ("ORVR") has not been evaluated to determine the emissions impact. Fugitive emissions which may occur when the underground storage tanks are under positive pressure have not been quantified and were not included in the calculation of system effectiveness.** Exhibit 1 contains a list of the equipment certified for use with the INTELLIVAC system. Exhibit 2 contains installation and performance specifications for the system. Exhibit 3 contains a procedure for testing the static pressure integrity of the underground storage tank. Exhibit 4 contains a procedure for verifying dispensing rate.

IT IS FURTHER ORDERED that the dispensing rate for installations of the INTELLIVAC system shall not exceed ten (10.0) gallons per minute when only one nozzle associated with the product supply pump is operating. This is consistent with the flowrate limitation imposed by United States Environmental Protection Agency as specified in the Federal Register, Volume 58, Number 55, page 16019. Dispensing rate shall be verified as specified in Exhibit 4.

IT IS FURTHER ORDERED that compliance with the certification requirements and rules and regulations of the Division of Measurement Standards of the Department of Food and Agriculture, the State Fire Marshal's Office, and the Division of Occupational Safety and Health of the Department of Industrial Relations is made a condition of this certification.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The INTELLIVAC system shall be installed only in facilities which are capable of demonstrating on-going compliance with the vapor integrity requirements contained in Exhibit 3 of this Order. The owner or operator of the installation shall conduct, and pass, a Static Pressure Decay test as specified in Exhibit 3, no later than 60 days after startup and at least once in each twelve month period. The owner or operator of the installation shall conduct, and pass, an Air-to-Liquid Ratio test as specified in TP-201.5 no later than 60 days after startup and at least once in each twelve month period thereafter. The test results shall be made available to the local air pollution control or air quality management district upon request within fifteen days after the tests are conducted, or within fifteen days of the request. Alternative test procedures may be used if determined by the Executive Officer, in writing, to yield comparable results.

IT IS FURTHER ORDERED that the INTELLIVAC system, as installed, shall comply with the procedures and performance standards the test installation was required to meet during certification testing. If, in the judgment of the Executive Officer, a significant fraction of installations fail to meet the specifications of this certification, or if a significant portion of the vehicle population is found to have configurations which significantly impair the system's collection efficiency, the certification itself may be subject to modification, suspension or revocation.

IT IS FURTHER ORDERED that the certified INTELLIVAC system shall, at a minimum, be operated in accordance with the manufacturer's recommended maintenance intervals and shall use the manufacturer's recommended operation, installation, and maintenance procedures.

IT IS FURTHER ORDERED that all nozzles approved for use with the INTELLIVAC system shall be 100 percent performance checked at the factory, including checks of the integrity of the vapor and liquid path, as specified in Exhibit 2 of this Order, and of the proper functioning of all automatic shut-off mechanisms.

IT IS FURTHER ORDERED that each vapor pump shall be adjusted and 100 percent performance checked at the factory, including verification that the pump performance is within the range specified in Exhibit 2 of this Order.

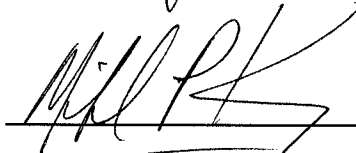
IT IS FURTHER ORDERED that the certified INTELLIVAC system shall be performance tested during installation for ability to dispense gasoline and collect vapors without difficulty, in the presence of the station manager or other responsible individual. Franklin Electric shall provide, to the station owner, operator or designee, CARB-approved copies of the installation and maintenance manuals along with instructions in the proper use of the INTELLIVAC system, its repair and maintenance schedule, and where system and/or component replacements can be readily obtained, which are to be stored at the facility. Revisions to the manual are subject to approval by CARB.

IT IS FURTHER ORDERED that the certified INTELLIVAC system shall be warranted by Franklin Electric, in writing, for at least one year, to the ultimate purchaser and each subsequent purchaser, that the vapor recovery system is designed, built and equipped so as to conform at the time of original installation or sale with the applicable regulations and is free from defects in materials and workmanship which would cause the vapor recovery system to fail to conform with applicable regulations. Franklin Electric shall provide copies of the manufacturer's warranty for the INTELLIVAC system to the station manager, owner or operator. Hoses, nozzles and breakaway couplings shall be warranted to the ultimate purchaser as specified above for at least one year, or for the expected useful life, whichever is longer.

IT IS FURTHER ORDERED that any alteration of the equipment, parts, design, or operation of the systems certified hereby is prohibited, and deemed inconsistent with this certification, unless such alteration has been approved by the Executive Officer or his/her designee.

IT IS FURTHER ORDERED that the INTELLIVAC certification Executive Order G-70-169, issued February 9, 1996, is hereby superseded by this Executive Order.

Executed at Sacramento, California, this 11 day of August, 1997.



Michael P. Kenny
Executive Officer

Attachments

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Exhibit 1

INTELLIVAC System Equipment List

<u>Component</u>	<u>Manufacturer / Model</u>	<u>State Fire Marshal Identification Number</u>
Nozzles	OPW 11VAI-xx (with vapor valve and Efficiency Compliance Device (ECD)) xx = 63 (15/16" OD spout, hold open latch (HOL)) 68 (13/16" OD spout, HOL) 83 (15/16" OD spout, no HOL) 88 (13/16" OD spout, no HOL) See Figure 2C-1	005:008:050
	Husky V34 Model 6250 (with vapor valve and (VSG)) See Figure 2C-2	005:021:008
Inverted Coaxial Hoses	Catlow Vapor Mate Dayco 7282 Superflex 2000 Dayco 7292 Superflex 4000 Dayco 7246 Flex-Ever Ultimate Goodyear Flexsteel GT Sales/Hewitt Superflex 2000 Thermoid Hi-Vac Thermoid Hi-Vac S VST VSTaflex VST VST-CIS	005:033:005 005:033:005 005:033:006 005:033:007 005:036:002 005:033:005 005:037:003 005:037:004 005:052:001 005:052:001
	OR Any inverted coaxial hose which is CARB-certified for use with the INTELLIVAC system	
Breakaway/Hose Combinations	VST-IS-BK (Breakaway includes a vapor poppet.)	005:044:004
	OR Any inverted coaxial breakaway/hose combination with a vapor valve which is CARB-certified for use with the INTELLIVAC system.	

<u>Component</u>	<u>Manufacturer / Model</u>	<u>State Fire Marshal Identification Number</u>
Breakaway Couplings	With A Vapor Poppet	
	Catlow AV2001 (reconnectable)	005:030:006
	Catlow AVR200S (reconnectable)	005:030:010
	Emco Wheaton A5219-001 (reconnectable)	005:030:010
	Husky 4034 (reconnectable)	005:021:009
	OPW 66CIP (reconnectable)	005:030:010
	OPW 66CAS	005:008:056
	Richards VA-50 (reconnectable)	005:031:007
	Richards VA-50B (reconnectable)	005:031:014
	Richards VA-60	005:031:009
	OR	
	Any inverted coaxial breakaway with a vapor valve which is CARB-certified for use with the INTELLIVAC system.	
Swivels		
	OPW Model 43-IS	005:008:057
	Richards MFVA	005:031:015
	OR	
	Any inverted coaxial swivel which is CARB-certified for use with the INTELLIVAC system.	
Breakaway/Swivel Combinations		
	Richards STVA	005:031:016
	(Breakaway includes a vapor poppet.)	
	OR	
	Any inverted coaxial breakaway/swivel combination with a vapor valve which is CARB-certified for use with the INTELLIVAC system.	
Flow Control Units		
	Catlow I10G-1A	005:030:013
	Healy 1301M	005:027:020
	Healy 1302M	005:027:020
	Husky 5837	005:021:012
	OPW 66FL	005:008:054
	OPW 66FD	005:008:054
	Richards FRVAD	005:031:017
	Vapor Systems Technologies (VST)	005:044:001
	OR	
	Any inverted coaxial flow control unit which is CARB-certified for use with the INTELLIVAC system.	

<u>Component</u>	<u>Manufacturer / Model</u>	<u>State Fire Marshal Identification Number</u>
Breakaway/Flow Control Unit Combinations		
	OPW 66FLB (Breakaway includes a vapor poppet.)	005:008:055
	OR Any inverted coaxial breakaway/flow control unit combination with a vapor valve which is CARB-certified for use with the INTELLIVAC system.	
Pressure/Vacuum Valves		
	OPW 523LP, 523LPS (settings as specified below)	005:008:051
	Hazlett H-PVB-1 Gold label (settings as specified below)	005:017:004
	Morrison Brothers 749CRB0600 AV (settings as specified below)	005:041:001
	OR Any CARB-certified valve with the following pressure and vacuum settings, in inches water column (wc): <u>Pressure</u> : three plus or minus one-half inches (3.0 ± 0.5 ") water column. <u>Vacuum</u> : eight plus or minus two inches (8 ± 2 ") water column.	
INTELLIVAC Pump System		
	The system is an integrated vapor recovery unit consisting of three separate parts that are integrated into one unit (See Figure 2B) The three components are: 1) electronic (computerized) control unit 2) AC 115 or 230 volt electric motor 3) A rotary vane pump (1/8 hp) Franklin Electric Model Number: 9430000XXX where XXX varies from 001 to 999 depending on the pump colors, port orientation and design voltages.	005:053:001

<u>Component</u>	<u>Manufacturer / Model</u>	<u>State Fire Marshal Identification Number</u>
Dispensers	<p>Tokheim Premier Series Dispensers: HxxxBR/suffix/ where "H" = High hose "xxx" = 311, 312, 322, 324, 411, 413, 414, 422, 426, 428 "B" = Premier Series "R" = Remote Dispenser "suffix" = B3 for 3 products, B4 for 4 products, B5 for 5 product blender, and EB for Electronic Blender</p> <p>H424B, H412B, H424B-EB, H412B-EB, H722B-R, H724B-R, H722B-S, and H724B-S.</p> <p>Tokheim non-Premier Series Dispensers 162, 162TW, 162FL, 162FL-TW, 262, 262TW, 262FL, 262FL-TW, 262A, 262A-TW, 262A-FL, and 262A-FL-TW.</p> <p>Schlumberger Centurion Series Dispensers 005:050:003 ABCDE-FG-H-IJ-K-L-M-N where A = Number of Inlets (1-4) B = Number of Products (1-6) C = Number of Hoses Front Side (1-4) D = Number of Hoses Back Side (1-4) E = Frame Size: (1 = Narrow, 2 = Wide) F & G = Display Type (01-30) H = Voltage (1-9) I & J = Vapor recovery type (88 for Franklin vapor assist) K = Future leak detection options (1-9) L = Intercom (1-9) M = Lighted panel (8 = no, 9 = yes) N = Presence of canopy light wires (4 = no, 5 = yes)</p> <p>OR any other dispenser that meets the dispenser specifications listed in Exhibit 2 of this Order.</p>	
Phase I Adaptors	<p>Any CARB-certified device which prevents loosening or overtightening of the Phase I product and vapor adaptors.</p> <p><u>Note:</u> For systems installed before two CARB-certified devices which prevent loosening or overtightening of the Phase I product and vapor adaptors are available, or within sixty days after that date, any CARB-certified Phase I product adaptor may be used for a period not to exceed four years from the date the second device was certified.</p>	

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Exhibit 2

Specifications for the INTELLIVAC Vapor Assist System

Figures 2A-1 through 2A-5 contain drawings of a typical installation of the INTELLIVAC system. Figure 2B depicts the vapor pump for the INTELLIVAC system. Figure 2C-1 and 2C-2 depict the nozzles approved for use with the INTELLIVAC system. Figure 2D illustrates the correct method for using the A/L adaptor. Figure 2E depicts instructions for conducting air-to-liquid ratio testing with the Husky V34 6250 nozzle and the INTELLIVAC system.

Nozzles

1. OPW 11VAI

An efficiency compliance device (ECD) shall be installed on the OPW 11VAI nozzle at the base of the spout, as shown in Figure 2C-1. Any nozzle with an ECD which is missing, or which is damaged such that at least one-fourth (1/4) of the circumference is missing, or which has cumulative damage equivalent to at least 1/4 of the circumference missing, is defective and shall be immediately removed from service.

2. The OPW 11VAI nozzle may use either an aluminum spout or a stainless steel spout. The aluminum spout has a total of 12 vapor recovery holes while the stainless steel spout has a total of 18 vapor recovery holes. Figure 2C-1 shows a typical 11VAI nozzle with an aluminum spout configuration.

3. Husky V34 6250

The Husky V34 6250 nozzle shall be operated with a vapor splash guard (VSG). The Husky V34 6250 nozzle uses a solid spout design which does not have any vapor collection holes on the tip of the spout. Gasoline vapors are directed to the base of the spout by the VSG. As shown in Figure 2C-2, there is a small hole at the base of the VSG to prevent a complete seal with the fill pipe and avoid over pressurization of the vehicle fuel tank. A Vapor Splash Guard (VSG) shall be installed on the Husky V34 6250 nozzles at the base of the spout.

- **Damaged or Missing VSG**

Any Husky V34 6250 nozzle with a VSG which is missing, or which is damaged such that at least a one and one-half (1.5) inch slit has developed, or which has cumulative damage equivalent to at least a 1.5 inch slit, is defective and shall be immediately removed from service.

- **Holes in VSG**

Any Husky V34 6250 nozzle which is damaged such that greater than a three-eighths (3/8) inch hole has developed, or which has cumulative damage greater than a 3/8 inch hole, is defective and shall be immediately removed from service. Nozzles installed and in service prior to the issue date of this Executive Order may have a VSG with one one-eighth (1/8) inch hole, or may be modified to have four (4) three-sixteenth (3/16) inch holes, which are equivalent in area to a 3/8 inch hole.

- **Compression of VSG**

Any Husky V34 6250 nozzle which has a VSG compressing more than one-half (0.5)

inches when a compression force of at least 1.5 pounds is applied is defective and shall be immediately removed from service. (Note: do not include the compression length of the VSG "flange".)

6. Failure mode testing demonstrated that blockage of some of the vapor collection holes in the spout of the nozzle has negligible effect on the operation of the system until the number of unblocked holes is less than required below. The Husky V34 6250 nozzle uses a solid spout design which does not have any vapor collection holes on the tip of the spout. Gasoline vapors are directed to the base of the spout by the VSG where they can be collected by the INTELLIVAC system.

Nozzle	Minimum Number of <u>Unblocked</u> Vapor Holes Required
OPW 11VAI	2
Husky V34 6250	N/A

7. The nozzles shall have an integral vapor valve which prevents the loss of vapor from the underground storage tanks, ensures proper operation of the system and prevents the ingestion of air into the system when another nozzle which is connected to the same vapor pump is used. Any nozzle with a defective vapor valve will substantially impair the effectiveness of the other nozzles associated with the same vapor pump. Therefore, any nozzle with a defective vapor valve, and all nozzles at the same fueling point (dispenser side), shall be immediately removed from service and the vapor path shall be closed as soon as practicable.

NOTE: A defective vapor valve will also impair the integrity of the system and may result in
vapor loss from or air ingestion into the underground storage tank.

8. Nozzles shall be 100 percent performance checked at the factory, including checks of all shutoff mechanisms and of the integrity of the vapor path. The maximum allowable leak rate for the nozzle shall not exceed the following:

0.038 CFH at a pressure of two inches water column (2" wc), and
0.005 CFH at a vacuum of twenty seven inches water column (approx. 1 psi).

9. Leaded and unleaded spouts are interchangeable.
10. Sealing of the vapor holes on the nozzle spout (such as placing a balloon or the fingers of a glove over the holes on the nozzle spout, or bagging nozzles) is not permitted during static pressure decay tests. Sealing of the nozzle vapor holes during a static pressure decay test may mask a defective vapor valve.

Dispensing Rate

1. The dispensing rate for installations of the INTELLIVAC system shall not exceed 10.0 gallons per minute when only one nozzle associated with the product supply pump is operating. This shall be determined as specified in Exhibit 4.
2. The dispensing rate shall be not less than 6.0 gallons per minute when measured at the highest possible flowrate and when only one nozzle associated with the product supply pump is operating.

Inverted Coaxial Hoses

1. The length of hose which may be in contact with the island and/or ground when the nozzle is properly mounted on the dispenser is limited to six inches (6").
2. The maximum length of the hose shall be fifteen feet (15').

Breakaway Couplings

1. Breakaway couplings are optional but, if installed, only CARB-certified breakaways which close the vapor path may be used.

INTELLIVAC System

1. The INTELLIVAC system Franklin Electric Model Number 9430000XXX (where XXX = 001 to 999) shall consist of an integrated vapor recovery unit made up of an electronic (computerized) control unit and a one-eighth (1/8) hp alternating current electric motor that drives a variable speed rotary vane pump. As the flow of fuel changes, the INTELLIVAC system responds with a change in pump speed to maintain a vapor to liquid ratio of 1.0.

The A/L ratio of the system measured at a flowrate between six and ten gallons per minute (6 - 10 gpm), shall be 0.98 plus or minus 0.10 (0.88 to 1.08). Any fueling point not capable of demonstrating compliance with this performance standard shall be deemed defective and removed from service. The A/L ratio shall be determined by using the CARB-approved procedure TP-201.5. Alternative test procedures may be used if they are determined by the Executive Officer, in writing, to yield comparable results. Figure 2D illustrates the correct method for using the A/L adaptor. Husky shall provide instructions on how to conduct A/L testing similar to the instructions listed in Figure 2E.

NOTE: This test procedure returns air rather than vapor to the storage tank, and normally causes an increase in storage tank pressure which may result in vent emissions. This is a temporary condition due to the test and should not be considered an indication of malfunction or noncompliance.

2. The INTELLIVAC system shall have the following electronic protective features:
 - Over-Temperature Protection. The system shall shut down if the pump exceeds 90 degrees Celsius. Once shut down, the system shall reset automatically when the pump cools down below 80 degrees Celsius.
 - Voltage Protection. For systems designed to operate with 115 volts, the system electronic controls shall automatically regulate voltages of 90 to 135 volts to provide the proper operating voltage for the motor. Voltages outside of this range shall cause the system to shut down (i.e., high voltage may result in over heating and/or power levels being exceeded). For systems designed to operate with 230 volts, the operating voltage range is specified at 180 to 270 volts.
 - Power Level Control. The system shall automatically sense conditions that cause high power levels and shut down. Conditions causing high power levels are such as blocked pump inlets, locked rotor condition of the motor, shorted motor windings, pump overload conditions. An error signal shall be sent to the master control inside the service station. The system shall then restart automatically. This "shut down-send signal-wait-restart" cycle will occur three times. On the third cycle it shall not restart automatically. Instead it must be manually reset by a "restart signal" from the service station.
3. The system shall generate an error signal if a liquid blockage in the vapor path is sustained for more than 15 seconds.

Dispenser Specifications

1. If the INTELLIVAC system is installed in dispensers other than those specified in Exhibit 1 of this Order, then each dispenser shall be:
 - a) CARB-certified in the applicable revision of Executive Order G-70-52, or exempt under the provisions of Exhibit 2, Footnote 4, of that Order.
 - b) Electronically compatible with the INTELLIVAC system, which must be capable of displaying the electronic protective features as specified in this Exhibit.
 - c) Tested for compliance with air to liquid ratio limits contained in this Exhibit. The test shall be conducted at least upon equipment installation in accordance with TP 201.5, or an alternative test method approved by the Executive Officer.

Pressure/Vacuum Valves for Storage Tank Vents

1. A pressure/vacuum (P/V) valve shall be installed on each tank vent. Vent lines may be manifolded to minimize the number of P/V valves and potential leak sources, provided the manifold is installed at a height not less than 12 feet above the driveway surface used for Phase I tank truck filling operations. At least one P/V valve shall be installed on manifolded vents. If two P/V valves are desired, they shall be installed in parallel, so that each can serve as a backup for the other if one should fail to open properly. The P/V valve shall be a CARB-certified valve as specified in Exhibit 1. The outlets shall vent upward and be located to eliminate the possibility of vapor accumulating or traveling to a source of ignition or entering adjacent buildings.

2. The P/V valve is designed to open at a pressure of approximately three inches water column (3" wc). Storage tank pressure which exceeds 3" wc for more than a short time may indicate a malfunctioning pressure/vacuum vent valve.

Vapor Recovery Piping Configurations

1. The recommended maximum pressure drop through the system, measured at a flow rate of 60 SCFH with dry Nitrogen gas, is 0.05 inches water. The maximum allowable pressure drop through the system shall never exceed one-half inch (0.5") water column at 60 SCFH. The pressure drop shall be measured from the dispenser riser to the UST with pressure/vacuum valves installed and with the poppeted Phase I vapor connection open.

Note: The A/L test may be used to verify proper operation of the system, in lieu of measuring the pressure drop through the lines, provided that at least two gallons of product is introduced into the system at the termination of the vapor return lines, prior to the test.

2. All vapor return lines shall slope a minimum of 1/8 inch per foot. A slope of 1/4 inch or more per foot is recommended wherever feasible.
3. The dispenser shall be connected to the riser with either flexible or rigid material which is listed for use with gasoline. The dispenser-to-riser connection shall be installed so that any liquid in the lines will drain toward the UST. The internal diameter of the connector, including all fittings, shall be not less than five-eighths inch (5/8").
4. All vapor return and vent piping shall be installed in accordance with the manufacturer's instructions and all applicable regulations.
5. No product shall be dispensed from any fueling point associated with a vapor line which is disconnected and open to the atmosphere. If vapor lines are manifolded, this includes all fueling points in the facility.
6. The recommended nominal inside diameter of the underground Phase II plumbing is as indicated in Figures 2A-1 through 2A-5. Smaller vapor lines are not recommended but may be used provided the pressure drop criteria specified above are met. The vapor return lines shall be manifolded below grade at the tanks as indicated in the figures.

Exception: For installations with a vapor return line directly to only one tank, and for which a manifold on the tank vents will be used to provide part of the vapor return path to other tanks, the vent manifold may be used as an alternative to the underground manifold only in existing installations where the vapor piping is already installed, and shall not be used in "new" installations where vapor piping is being installed. For installations with dedicated vapor piping directly to each tank, the vent manifold is approved for both new and existing installations and an additional tank manifold below grade is optional but not required.

Phase I System

WARNING: Phase I fill caps should be opened with caution because the storage tank may be under pressure.

1. The Phase I system shall be a CARB-certified system which is in good working order and which demonstrates compliance with the static pressure decay test criteria contained in

Exhibit 3 of this Order. Coaxial Phase I systems shall not be used with new installations of the system. Replacement of storage tanks at existing facilities, or modifications which cause the installation of new or replacement Phase I vapor recovery equipment, are considered new installations with regard to this prohibition. An exception to this prohibition may be made for coaxial Phase I systems CARB-certified after January 1, 1994, as compatible for use with Phase II systems which require pressure/vacuum vent valves. Where installation of the INTELLIVAC system is made by retrofitting previously installed equipment, local districts may elect to allow existing coaxial Phase I systems to remain in use for a specifically identified period of time provided the following conditions are met:

- the existing coaxial Phase I system is a poppeted, CARB-certified system capable of demonstrating compliance with the static pressure decay test as specified above; and
 - installation of the Phase II system requires no modification of the UST(s) and/or connections.
2. Spill containment manholes which have drain valves shall demonstrate compliance with the static pressure decay criteria with the drain valves installed as in normal operation. Manholes with cover-actuated drain valves shall not be used in new installations (as defined above). Manholes with cover-actuated drain valves may remain in use in facilities where installation of the INTELLIVAC system does not require modification of the tank fittings provided the facility demonstrates compliance with static pressure decay test criteria both with the cover open and with the cover closed.
 3. The Phase I vapor recovery system shall be operated during product deliveries so as to minimize the loss of vapors from the facility storage tank which may be under pressure. Provided it is not in conflict with established safety procedures, this may be accomplished in the following manner:
 - the Phase I vapor return hose is connected to the delivery tank and to the delivery elbow before the elbow is connected to the facility storage tank;
 - the delivery tank is opened only after all vapor connections have been made, and is closed before disconnection of any vapor return hoses; and
 - the vapor return hose is disconnected from the facility storage tank before it is disconnected from the delivery tank.
 4. Phase I deliveries shall be accomplished so as to ensure that there is at least one vapor connection between the cargo tank compartment headspace and the storage tank associated with the product delivery. There shall be no more than two product hoses used with one with one vapor hose connected, and no more than three product hoses used with two vapor hoses connected.
 5. Storage tank vent pipes, and fill and vapor and manhole tops, shall be maintained white, silver or beige. Colors which will similarly prevent heating of the system due to solar gain may also be used, provided they are listed in EPA AP-42 as having a factor the same as or better than that of the colors listed above. Existing facilities which were installed before April 1, 1996, must be in compliance with this requirement no later than January 1, 1998. Manhole covers which are color coded for product identification are exempted from this requirement.